

**STRATEGY
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JOINT LOGISTICS COMMAND & THE ARMY AFTER NEXT

BY

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USAWC STRATEGY RESEARCH PROJECT

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ABSTRACT

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Changes in technology will drive changes in military organization, doctrine, and methods of employment. These changes will also result in profound changes in the National Military Strategy. In the area of logistics, support to deployed forces will become increasingly joint in nature, due to pressures to exploit emerging business practice efficiencies, and to save dollars. The Army, due to its existing joint support responsibilities, will be tasked to take the lead in organizing and operating a "Joint Theater Logistics Command", which will integrate logistics for joint force commanders in active theaters of operations. This doctrinal and organizational shift will evolve in concert with the Revolution in Military Affairs (RMA) that is shaping the Army After Next (AAN).

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JOINT LOGISTICS COMMAND & THE ARMY AFTER NEXT

BACKGROUND

As the nation prepares to enter the next century, the United States Army as well as the entire Department of Defense (DOD) faces an uncertain future. The collapse of the Soviet Union, coupled with the failure of communism as a social and economic movement, has left the United States as a victorious, single superpower. No enemy exists today with the might to challenge the U.S., either militarily or economically.

The success in winning the Cold War has led to a predictable drawdown in U.S. military forces and capabilities. At the same time, a new national strategy focusing on global engagement¹ has led to frequent commitment of DOD forces in a variety of peacekeeping, humanitarian, and other operations other than war, as well as several operations that verge on war. The result is that all of the military services find themselves, at the end of the twentieth century, extremely busy conducting real-world operations in many nations, albeit with smaller forces and declining operating budgets.

Adding to the challenges the U.S. military community faces is the requirement to modernize for the future. This challenge, as described by the Chairman of the Joint Chiefs of Staff, "will be to transform America's Armed Forces into a

future joint force, tailored to a new security environment and capable of employing revolutionary new systems and operational concepts to achieve decisive success.”² As the Chairman’s statement implies, modernization of the military for the next century will encompass changes in doctrine and organization, as well as the incorporation of new technologies. The expected depth and breadth of the changes to the DOD and the military services have led some observers to describe the process as a Revolution in Military Affairs (RMA).³ Complementing this change process is a Revolution in Military Logistics (RML), an ongoing effort by the DOD logistics community to develop, test, and implement a similar set of sweeping changes in the logistics apparatus of DOD. The U.S. Army’s RML has the goal of replacing the current “mass of supplies” system with a high-speed, distribution-based system that uses information technology for predictive logistics and delivery.⁴ The immense challenges associated with modernization are magnified by the constrained operating budgets the services’ face, differences of opinion on the types of forces needed for future warfare, and the requirement to maintain a capability to conduct military operations across the spectrum of conflict throughout the modernization process.

This paper will briefly discuss the proposed changes to the military, starting with the near term changes (Joint

Vision 2010 and Army XXI), and then addressing the possible force designs for the Army After Next (AAN). The support structure for the AAN forces is the focus of the paper, specifically whether or not the Army's logistics forces will expand their responsibilities to include support to joint forces (U.S. Air Force, Navy, and Marine Forces). The reasons why this course of action is examined will be evident as the discussion of future logistics force options unfolds. Following the discussion of future force options, the paper will examine current logistics support doctrine, and how possible future support options for joint forces may evolve. An evaluation of the utility of these proposed concepts will follow. The evaluation of the AAN logistics structure will focus on its ability to perform all required logistics functions, but will also consider possible objections based on current service responsibilities as defined in Title 10 to the United States Code.

JOINT VISION 2010 & AAN

The near term guidance for DOD modernization is provided by Joint Vision 2010. This document describes a military that uses four key operational concepts: precision engagement, dominant maneuver, focused logistics, and full dimensional protection, in concert with two key enablers (information superiority and technological innovation), to

achieve full-spectrum dominance.⁵ Due to the relatively short horizon between the present and the envisioned future, JV 2010 does not envision a wholesale replacement of current weapons systems. Instead, capability will be enhanced by improvements in doctrine and organization, with selected technological applications being used to enhance the synergistic capabilities of the entire force. The key enabler is expected to be information superiority - the capability to exploit improvements in Command, Control, Computers, Communications, and Intelligence (C4I) systems. Technological innovation will improve U.S. C4I capabilities, which in turn will allow the vision of the four JV 2010 operational concepts to become reality.

The Army's portion of JV 2010, Army XXI, is completely in step with the Joint Vision. The Army plans to focus its modernization effort on C4I systems, to improve the capabilities of existing combat platforms. The result will be the Fully Digitized Divisions (FDD), which will use existing weapons such as the M1 Tank, Bradley Fighting vehicle, and Apache attack helicopter to better advantage through information dominance across the battlespace.⁶ By providing combat, combat support, and combat service support leaders and soldiers a common operating picture of the battlefield, the Army of Force XXI will be able to use existing, or legacy, systems to achieve the operational concepts of JV 2010.

The Army After Next is the term given to the as yet undefined force that will replace Army XXI. The AAN's arrival date is expected to be the year 2025, a date chosen in part due to assumptions that new technologies that provide ground forces with "leap ahead" capabilities will be available in that year. AAN is under intellectual development in a series of war games and think tank exercises in order to give the Army a vision of what capabilities it must acquire in order to remain a dominant land combat force⁷.

Although no decisions have yet been made on what AAN will be, initial wargame results postulate that the AAN will be primarily based in the continental United States (CONUS), strategically focused, and with global maneuver capability. It also must dominate the arena of information warfare. Achieving these traits will necessitate the acquisition of new systems, across all of the battlefield operating systems. The exact nature of these systems will not be known for some time, but technological breakthroughs are expected to dramatically alter factors such as weight, deployability, and consumption of consumables⁸.

Given the nature of present and anticipated Army missions, AAN is expected to consist of two distinctly different forces: an early deploying, RMA-equipped force, and a "legacy force" that will conduct sustained land combat operations. The

former force will have the most modern equipment the Army can afford, while the legacy force will quite possibly look very much like Army XXI. The envisioned employment concept of these forces is for the RMA force to deploy early into the contingency area, swiftly achieve dominance over opponents, and then conduct battle handover with the legacy force. This legacy, or campaign force, will conduct further combat operations as required, to "achieve victory in the broader political/military context"⁹. (Operations Other Than War (OOTW) appear to be another mission suitable for the legacy force, although I did not detect any mention of this in my survey of literature on the AAN). The cost of an RMA force appears to be a primary driver in the current vision of two armies in the AAN: a small RMA force, and a more robust legacy force to perform all but the most intense land force operations.

Major unanswered questions about the AAN include the utility of having two distinctly different forces; how to pay for the modernization/equipping of an RMA force; how coalition operations can be conducted if the RMA force's technological capabilities greatly exceed those of our allies; and the role of the National Guard and U.S. Army Reserve in the AAN. Although Reserve Component (RC) forces may be present in both the RMA and the campaign forces, both active and reserve component readiness and mobilization requirements may lead to the bulk of the

campaign force coming out of the RC. If, as many expect, the U.S. Army continues to perform OOTW missions, the efficacy of constituting the bulk of the campaign force with RC units may be questionable.¹⁰

The logistics structure of the AAN will also be primarily CONUS-based. Logistics organizations and command and control (C2) structures are expected to differ radically from the current force. A single logistics headquarters, with joint staffing and joint support missions, is envisioned as the logistics C2 enabler for the necessary seamless logistics support of an RMA force. This unit will be responsible for integrating the multiple logistics functions of acquisition, supply, maintenance, distribution, and sustainment of forces¹¹. This "National Logistics Command" will be responsible for the overall command and control (C2) of logistics support to all operations. When RMA forces deploy, tailored logistics support elements, as high-tech as the forces they support, will deploy and operate as Forward Support Units (FSUs) and Rear Support Units (RSUs). The former will operate in proximity to the supported combat forces, while the latter may operate at sea, from intermediate staging bases, or from distant locations. Innovative methods of resupply, coordinated by a logistics management system that maintains total asset visibility (TAV) across the force, will allow AAN logisticians to substitute

velocity for mass. Focused logistics support packages will flow from the CONUS sustainment base through the deployable forward logistics element, to the RMA combat force¹². The entire deployed force will be agile and lethal due to the National Logistics Command's ability to deliver precise logistics packages, including required support forces, to the right place at the right time¹³.

Legacy combat service support forces will support the legacy combat force. As with the combat forces, the current vision of the future sees two distinctly different logistics forces, due to the perceived cost of modernization as well as the anticipated missions. This legacy support organization will be heavier in both size and weight, will take longer to deploy, and will probably lack some of the key enablers present in the RMA force. However, it will possess at a minimum the key information-age technologies developed in support of JV 2010. Improved logistics C2 mechanisms should enable this legacy force to achieve some gains in precision delivery and operation of a distribution-based sustainment strategy. These gains will keep the entire logistics force operating a system that emphasizes speed of delivery over size of stockpiles.

LOGISTICS FORCES: FROM NOW TO THE ARMY AFTER NEXT

While the U.S. military's logistics structure is the best in the world, it has several limitations that hinder efficiency, economy, and support of joint warfighting forces. It is primarily service specific, with each service component operating a stovepiped supply and maintenance system that extends from tactical-level logistics back to acquisition at the wholesale level¹⁴. It is also expensive, not only due to the redundancies inherent in separate service logistical organizations, but also due to the current operating methods employed. Although all services have initiated changes to their support philosophy, U.S. logistics doctrine has traditionally relied on maintaining large stockpiles of supplies to allow combat forces to accomplish their wartime missions. This reliance on a mass of supplies is expensive both in dollars and in logistics force structure.

Notable exceptions to the service-specific logistics structure include the Defense Logistics Agency (DLA), and the U.S. Transportation Command (TRANSCOM). The DLA's mission is to "function as an integral element of the DOD logistics system and to provide effective and efficient worldwide logistics support to DOD components as well as to Federal agencies, foreign governments, or international organizations as assigned in peace or war".¹⁵ In practice the DLA now procures, stores, and issues

the vast majority of common supplies and spare parts used by the services. The services, and other DOD agencies, purchase their required items, be it fuel, food, or maintenance spares, from DLA using funds from their operating budgets. TRANSCOM is a unified command that is "responsible for providing strategic air, land, and sea transportation to deploy, employ, and sustain military forces to meet national security objectives across the range of military operations".¹⁶ USTRANSCOM, a joint warfighting headquarters, executes this mission by coordinating and directing the actions and employment of the service components responsible for air, sea, and land movements: the Air Mobility Command (Air Force), the Military Sealift Command (Navy), and the Military Traffic Management Command (Army).

Under our current logistics design and doctrine, support to a joint force is planned and executed by the various service components that constitute the joint force. The joint commander has a logistics staff officer (J4) who is responsible for articulating, in the joint warfighting plan, a general logistics concept as well as priorities of support. The detailed planning, however, is done by the services, due to their responsibility for actual execution. The Joint Force J4 is additionally responsible for monitoring the logistics posture of the force. This is tremendously challenging due to the fact that each service component uses unique logistics automation

systems, which are unable to "talk" to each other. The J4 therefore must rely on reports provided by the service component logisticians, instead of an automated system that tracks logistics data across the components. To better coordinate the efforts of the service components, the J4 may establish and operate a variety of joint logistics centers, offices, and boards that effect coordination and planning in those areas requiring joint logistics action¹⁷. Examples include transportation (Joint Transportation Board), mortuary affairs (Joint Mortuary Affairs Office), and acquisition of real estate (Joint Facilities Utilization Board). Although a joint force commander may exert directive authority over service component logistics commands to achieve joint warfighting aims, logistics support is primarily planned and executed by service components, and support to component forces is entirely the responsibility of the parent service¹⁸. In practice joint force commanders seldom exercise their directive authority for logistics, for many reasons. Service components normally plan support only for their respective service forces, because they are funded, manned, equipped, and trained to support within their own service. Directing an organization to provide support above and beyond this paradigm not only stretches its capabilities, but also jeopardizes support to the primary mission. For these reasons, service components perceive the use of directive

authority for logistics as mission threatening, and thus as a task to be avoided.

The Army is responsible for providing all required logistics support to Army forces in theater, to include Army Special Operations Forces. It accomplishes this mission by providing commanders from battalion level through corps with assigned and/or direct support logistics soldiers, equipment, and units. Additionally, other logistics forces operate in general support of Army forces in theater; normally these units provide specialized or high-volume supply, maintenance, and transportation support. These latter forces give the Army service component commander the ability to provide logistics support to other services. The Army is the only service that has this type of capability, and its doctrine acknowledges this mission¹⁹.

The Army's logistic support organizations include the forward, main, and aviation support battalions within the divisions; the Corps Support Command supporting the Corps; and the Theater Army Support Command (TASCOM) at the Army Service Component level. The latter is an emerging organization²⁰, and it will likely replace a theater organization that includes the Theater Army Area Command (TAACOM) and several functional commands, e.g., Engineer Command (ENCOM), Medical Command (MEDCOM), and Personnel Command (PERSCOM)²¹. The TASCOM will

unify all logistics functions under a single commander, which has the added advantage of providing the Army Component Commander with a single commander responsible for all logistics support operations. The Army Materiel Command (AMC) is the final link in the chain, serving as the wholesale logistics provider in the continental U.S. for the entire Army.

The Army plans to use certain key technological enablers, coupled with doctrinal changes, to revolutionize its logistics in support of JV 2010 and Army XXI. Organizational changes are occurring as well, although these will not be as radical as the technological and doctrinal changes. The most important change, which drives all the others, is a shift in support philosophy, i.e., the Army is replacing its system of logistics *mass* with a system that emphasizes logistics *velocity*²².

A system that emphasizes velocity over mass upends a paradigm of U.S. Army logistics that dates back to at least the Civil War. The reliance on great quantities of supplies has been required due to the difficulties inherent in forecasting supply requirements, tracking supply consumption, and establishing acceptable levels of theater supply reserves due to transportation constraints²³. The Army expects to shed its mass of supplies, and rely on rapid distribution to sustain deployed forces, through the use of information technologies. These will

allow rapid dissemination of key logistics information across every logistics command node, which in turn will allow rapid, accurate resupply from CONUS.

This exploitation of information technology, when coupled with the Army's existing support capabilities provides the basis for a shift to joint logistics organizations that can achieve the goals of the AAN. All of DOD is moving towards a velocity-based logistics system, as the commercial sector has proven that the concept can be implemented successfully with present technology.²⁴ The challenge for all of the Department of Defense is to integrate these modernization efforts, so that a deployed joint force commander will not be faced with the challenge of four service components competing for logistics resources within and to the theater. This competition will include not only a battle for space on scarce transportation assets, but also a competition for equally scarce bandwidth on joint communications architecture. Current joint doctrine, not to mention capabilities, does not adequately empower the CINC or JTF Commanders' J4 to synchronize a truly joint logistics effort. What is needed is a theater logistics commander, with an adequate staff and commensurate automation capabilities. The Army is the only service with the doctrine, organizations, and mission breadth to possibly perform this mission. A possible C2 architecture for this concept is pictured below.

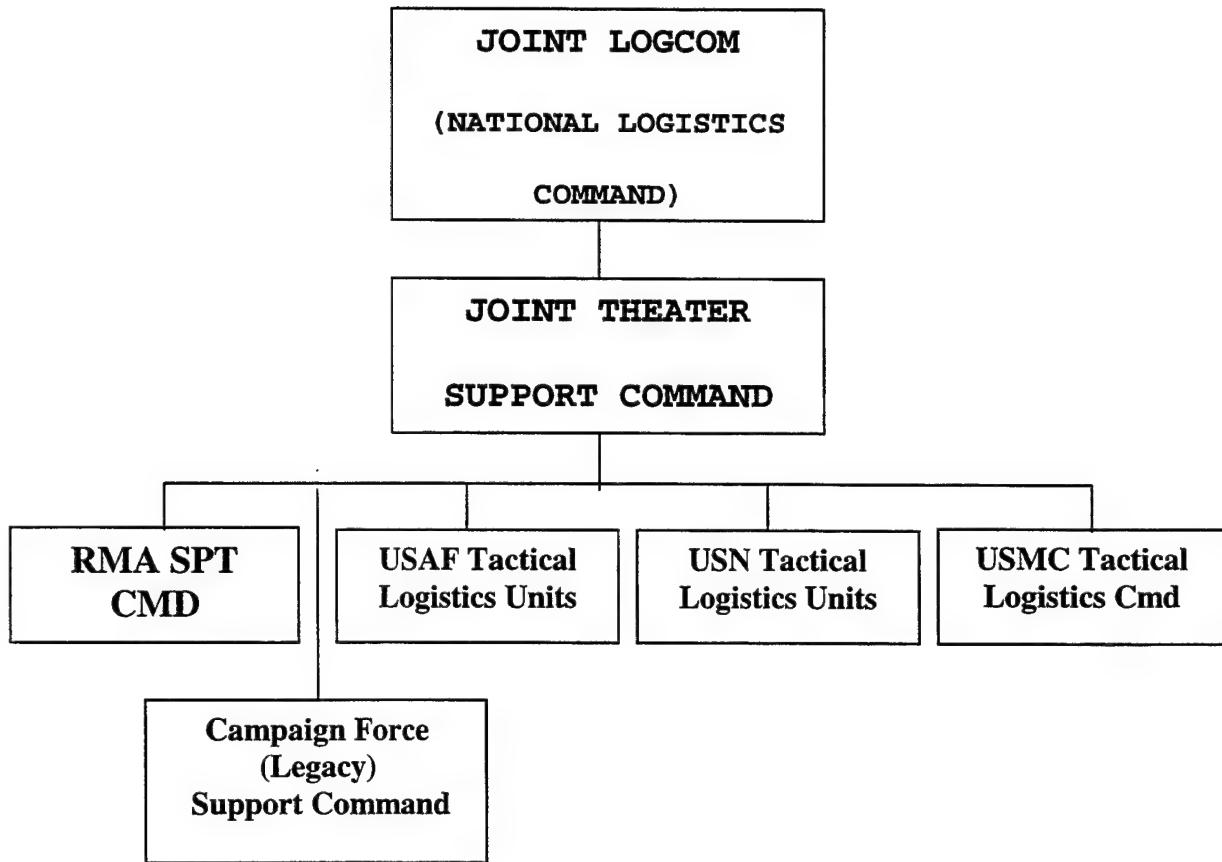


Figure 1 - THEATER LOGISTICS ARCHITECTURE

A National Logistics Command should replace the current service-specific stovepipe wholesale logistics organizations. DLA provides a functioning organizational model that the various component commands (Army Materiel Command, Air Force Materiel Command, Naval Air & Sea Systems Commands, Marine Corps Systems Command, etc) can be amalgamated into. This organization should perform for the services the wholesale functions of acquisition, storage, depot maintenance, and

testing that is now separate. Organizing these functions under a four-star logistics commander will enable realization of economies in facilities and procurement. It will also ease the transition to a DOD-wide logistics automation network, which is essential to realizing the Joint Vision of focused logistics.

The Army can create a Joint Theater Support Command now, out of existing Army logistics headquarters. This organization should be built around an echelon-above-corps (EAC) logistics headquarters, preferably a TASCOM. It should also be CONUS-based, and trained to deploy in support of any major regional contingency. A TASCOM can be built to include the staffing and expertise necessary to plan for, and support, a joint force. It will also eliminate the stovepipe logistics organizations currently resident in Army doctrine. Being CONUS-based, it can also establish habitual training and support relationships with both its customers (e.g., Army Corps and/or numbered Armies, Marine Expeditionary Forces, and USAF numbered Air Forces), and with the logistics units that will execute support tasks.

Service component logisticians must continue to provide tactical logistics support to their respective service combatants. The skills required to support air operations, amphibious forces, or ships at sea are core service competencies that must remain resident within the services. The same applies

to the support of an Army RMA or campaign force engaged in land combat or OOTW operations. The revolutionary doctrinal change herein will be that these tactical logisticians will have their efforts integrated at theater level by a commander empowered by the CINC or JTF commander. Enabled by improvements in logistics automation, the theater logistics commander, in concert with the national logistics commander, will be able to monitor all services components' logistic status (Joint Total Asset Visibility, or JTAV); know what supplies are enroute (In-Transit Visibility); and then set priorities that accord with the joint commander's intent. The joint vision of all logistics support flowing seamlessly, from CONUS to the deployed warrior, is achievable if doctrinal and organizational changes incorporate the available implementing technology.

JOINT LOGISTICS: ADVANTAGES & DISADVANTAGES

The primary advantage of implementing a Joint Logistics Command is greater efficiency in logistics operations. A single logistics commander should be able to reduce or eliminate duplication of effort within the services. These efficiencies should save the Department of Defense a significant amount of money. A more efficient logistics structure in CONUS should shrink the logistics footprint in theater, reduce

strategic lift requirements, and maximize the mutual support capability existent within the services. Examples include tasking across services for medical support, or civil engineering support.

A single logistics commander also enables the CINC or joint force commander to implement the directive authority for logistics specified in Joint Publications 0-2 (Unified Action Armed Forces)²⁵ and 4-0 (Logistic Support for Joint Operations). Delegating this authority to a Joint Logistics Commander will meet the intent of the Joint Regulations while allowing the CINC to concentrate on strategic and operational matters. Current organization of the joint force does not give the J4 ample resources: staff, automation, or rank - to carry out this function.

Finally, a single logistics coordinating headquarters will ease allocation of scarce resources in the rear area. Terrain management, infrastructure development, and procurement of host nation support are all resource areas that a joint logistics commander could effectively manage for the CINC. A single logistics commander can prevent wasteful competition for scarce host nation assets, particularly in contracting, between service components. A J4 staff cannot execute this task, particularly in the early stages of a deployment when competition for resources is at its keenest.

A doctrinal change as radical as this possesses its share of disadvantages. Not the least of these will be institutional resistance to change, in all of the services. In addition to parochial desires to protect "turf", or fend off missions perceived to be undesirable or incompatible with service culture²⁶, real objections can be raised over duties of the Services as prescribed in Title 10 of the United States Code. These Title 10 responsibilities translate into separate service budgets, which lead to many of the objections to jointness in logistics. For a national logistics commander to be effective at streamlining and integrating the CONUS wholesale logistics force, he or she must have budgetary authority, instead of reliance on service budgetary decisions. This will be an enormous change, but one which must be considered as part of the RMA. Such a change is not insurmountable.

Title 10 charges each military service, i.e., the Departments of the Army, Navy, and Air Force, with "providing forces organized, trained, and equipped to perform . . . roles . . . which are the broad and enduring purposes for which the Services were established by Congress".²⁷ This translates into each military service receiving money to pay for the costs of all the myriad tasks associated with execution of Title 10 responsibilities. In addition to the obvious and considerable difficulty of assigning costs appropriately in a joint support

environment, joint logistics support as a mission appears to not fit into any service's "broad and enduring" purpose.

Notwithstanding these real and perceived difficulties, Title 10 as written allows the Secretary of Defense to make the kinds of changes described above. For example: "The Secretary of Defense shall take appropriate action (including transfer, reassignment, consolidation, or abolition of any function, power, or duty) to provide more effective, efficient, and economical administration and operation, and to eliminate duplication, in the DOD".²⁸ The law also specifically addresses the subject of logistics. "Whenever the Secretary determines such action would be more effective, economical, or efficient, the Secretary may provide for the performance of a supply or service activity that is common to more than one military department by a single agency of the DOD".²⁹ Clearly, service objections to changes in joint logistics doctrine and organization, based solely on Title 10, are inadequate. Consolidation and reorganization, to include merging of separate budgets, is certainly possible under Title 10.

A valid objection is that, at present, no joint or service doctrine exists for a joint logistics command. Current historical examples of tactics, techniques, and procedures (TTP) for such an organization likewise do not exist. Creating a deployable joint logistics command will present a challenge to

develop and create the necessary TTP. This challenge will be especially large in the area of logistics automation, i.e., devising ways to tie together the various incompatible systems resident today in the services. However, the difficulty of the task argues for the creation of a command to take on the mission. Without a command actively pursuing solutions to this challenge, seamless joint logistics will never become a reality.

The disadvantages are real, but they are not insurmountable. They also do not outweigh the benefits to be gained by streamlining our logistics procedures to maximize our joint support capabilities. These kinds of changes make sense now, and they are absolutely essential to ensure a successful transition to an RMA force. The Army After Next, and the other services' equivalents, must be both effective on the battlefield, and cost effective at home, to fully realize the potential of the Revolution in Military Affairs.

CONCLUSION AND RECOMMENDATIONS

"Logistics organizations must have a service orientation, while jointly integrated, to provide responsive, efficient support to the warfighter."³⁰

The emerging picture of the AAN shows a force that will combine both ultra-modern weapons and forces, and a larger mass of forces that will be reliant on relatively aged but effective equipment. Theorists predict that the AAN will not

require the mass quantities of supplies needed today, due to advances in precision weaponry, bio-technology, and "demand reduction" technology.³¹ The tactics and organization of combat forces will change radically to accommodate these changes. What will not change, however, are the basic requirements of a logistician: to man, arm, fuel, and fix the force, while training and protecting logistical forces. Another constant for the Army is that all future operations are expected to be joint, and most will be combined.³²

The basic truths summarized above point to certain imperatives that must guide the Army (and DOD) as the journey to 2025 continues. First and foremost, no matter what technological achievements are incorporated into the force, adequate force structure must be maintained to ensure that logisticians can execute all of their mission essential tasks. There is a danger that improvements in various technologies, coupled with budgetary pressures and desires to trim the tooth to tail ratio, will lead to excessive force structure reductions. A desire to improve the AAN combat forces' agility, which can translate into shedding logistics units, may exacerbate this situation. It is possible that greater agility, coupled with an improved ability to acquire and hit targets, will actually increase logistical requirements in the future. The point is that force structure decisions must be driven by

knowledge of requirements, as determined by field testing, if at all possible.

Another truism is that future operations, no matter how hi-tech, will require that the Army operate with the other services. Army doctrine recognizes that we will most often operate in coalition, or combined, environments, as well. These facts lead to two conclusions. First, logistics connectivity with the other U.S. military services must be accomplished, to some acceptable standard, by the implementation of JV 2010. It must then be continually improved through 2025, to fully exploit the capabilities of the AAN modernized force. Secondly, the Army must maintain the capability to plan and execute logistics, at the human level, with coalition partners. These future partners will almost certainly not be as modernized as the AAN, so logisticians who know more than how to surf the Internet will be required. Once again, the requirement for adequacy in the manning of our logistics forces is apparent.

The challenge of implementing a revolution in military affairs will be immense. In the logistics field alone, the mind boggles at the thought of attempting to establish logistics connectivity between the various services' systems, or of untangling the financial regulations that hamstring every joint operation in red tape. Solving issues such as these, while simultaneously developing new doctrine and organizations, will

greatly stress the service. The continuing challenge of implementing new technology while required missions and training are executed will likewise add to a turbulent environment. A possible roadmap through this process is offered, as a starting point for the discussion of how to "get there from here."

The starting point must be with doctrine; in this case, joint doctrine should be the driver, and the Army should take the lead in writing it. The Chairman of the Joint Chiefs, speaking of the journey to JV 2010, says "Our starting point is joint doctrine - because doctrine undergirds everything we do, it is the logical beginning for our efforts to translate our vision of joint warfighting into reality."³³ Truly focused logistics will not happen if the services continue to operate independently in the development of their future logistics doctrine and TTP. Only the Army has the capability, due to its breadth of resources and theater-wide vision, to develop and implement a viable joint logistics command concept.

The next step is field-testing of doctrinal concepts. Here again, the Army has led the DOD in testing and evaluating itself as part of the change process. The Joint Chiefs of staff have at hand an asset to assist the Army in this test and evaluation phase, the U.S. Atlantic Command (ACOM). ACOM is tasked under the 1999 Unified Command Plan to conduct joint experimentation for the DOD³⁴. ACOM's stated goal is to enhance

joint integration - 'the synergistic blending of technology, systems, and doctrine from the different Military Services to improve interoperability and enhance joint capabilities."³⁵ A field-testing schedule, developed jointly by the Army and ACOM, is needed for the next several years to ensure that the proper training resources can be mustered to support these tests.

Exercise Roving Sands, the bi-annual theater ballistic missile defense exercise, appears to be an excellent opportunity for testing emerging logistics concepts. USACOM is already a participant, and so are the other service components. The Army and DOD could exploit this exercise to test fledgling joint logistics doctrine while simultaneously supporting the theater missile defense tests. This exercise, or similar large-scale field training events, can provide suitable tests for all involved in the development of a new doctrine.

Field testing of new organizations and doctrine must be complemented by rigorous intellectual analysis of proposed changes. New concepts and new technological capabilities must be scrutinized for their utility in the classic environment of war. Regardless of what is promised by dominance of information warfare, it is extremely likely that war will remain in the domain of uncertainty, ambiguity, and friction. We must recognize that new information management technologies will not eliminate the need for highly trained soldiers who can improvise

solutions during system failure. Our training, manning, and structure decisions must be evaluated using this reality check.

If the Army and DOD follow a path such as this, there is still no guarantee that the ultimate solution will be "right". The chances of getting a very wrong solution, however, are minimized by an approach that emphasizes doctrinal development, testing, and intellectual scrutiny. There is a great temptation in some quarters rush to "new and innovative" solutions.³⁶ While it is true that the DOD may lag behind the commercial sector in its exploitation of technology and better business solutions, it is also true that the price of failure in a military operation is considerably higher than that of a business failure. For this reason, and also because of the continuing requirement for the Army and DOD to remain ready to deploy, fight, and win, a more cautious approach to the RMA and RML is warranted. The Army and DOD must evolve to new doctrine and organizations, as opposed to a sudden, disconcerting "revolution." A deliberate approach that actively involves all of the services, as well as an impartial testing capability, gives us the best chance of adopting a sound approach to the challenge of implementing feasible joint logistics combat service support.

ENDNOTES

¹ The White House, A National Security Strategy For A New Century, (Washington, D.C., U.S. Government Printing Office, 1998), October 1998, 1.

² GEN Henry H. Shelton, "Operationalizing Joint Vision 2010," Military Review (May-June 1998): 81.

³ James R. Fitzsimonds and Jan M. Van Tol, "Revolutions in Military Affairs," Joint Force Quarterly (Summer 1998): 25. The authors' definition of an RMA, which is also consistently used by DOD in discussions of this phenomenon, is that a true RMA consists of a combination of technological development, doctrinal innovation, and organizational adaptation.

⁴ GEN Johnnie E. Wilson, "The New Millennium: Getting There From Here," Army (February 1999): 20.

⁵ Shelton, "Operationalizing Joint Vision 2010," 81.

⁶ Department of the Army, FORCE XXI OPERATIONS, A Concept for the Evolution of Full-Dimensional Operations for the Strategic Army of the Early Twenty-First Century, TRADOC Pamphlet 525-5 (Washington, D.C.: U.S. Department of the Army, 1 August 1994), 3-4.

⁷ Strategic Assessments Center (Science Applications International Corporation), Dominating Maneuver Synthesis Report (Sponsored by OSD/Net Assessment and U.S. Army Deputy Chief of Staff, Operations and Plans, February 1998), Tab E (Synthesis Briefing).

⁸ Ibid., 13-14.

⁹ Strategic Assessments Center (Science Applications International Corporation), Dominating Maneuver Game Force Integration Read-Ahead Book (Sponsored by OSD/Net Assessment and U.S. Army Deputy Chief of Staff, Operations and Plans, October 1998), Tab C.

¹⁰ LTC David T. Fautua, "How the Guard and Reserve Will Fight in 2025", Parameters VOL. XXIX, No 1 (Spring 1999): 132-133. Activating reserve component soldiers for any mission other than defense of the country in a national emergency challenges the basic foundation upon which the entire reserve structure is

built. Mobilizing RC units in a timely manner, finding adequate time for individual and collective training after alert but prior to actual mobilization, and maintaining employment for deployed RC soldiers are some of the most easily identified impediments to frequent use of the Army Reserve and National Guard.

¹¹ Strategic Assessment Center, Dominating Maneuver Synthesis Report, 33.

¹² Ibid., 33-36.

¹³ Department of the Army, Logistics Integration Agency, The Army Strategic Logistics Plan: Battlespace Logistics - The Vision (Washington, D.C.: U.S. Department of the Army, 1996).

¹⁴ LTC Christopher Paparone, "Case for a Unified Logistics Command," Army Logistician (March-April 1995): 4. This article lists nine separate service and/or DOD wholesale logistics commands, all operating semi-independently of each other, and all using differing automation and management tools.

¹⁵ MAJ Nathan Robinson, The Defense Logistics Agency (Montgomery, Alabama: Air University Press, October 1993), 6.

¹⁶ The Joint Staff, Doctrine for Logistic Support of Joint Operations, Joint Publication 4.0 (Washington, D.C.: The Joint Staff, 27 January 1995), I-10.

¹⁷ Ibid., B-1.

¹⁸ Ibid., vi-vii. A joint force commander's directive authority for logistics is defined as "the authority to issue to subordinate commanders directives . . . necessary to ensure the effective execution of approved operations plans . . . and the prevention or elimination of unnecessary duplication of facilities and overlapping of functions among the service component commands."

¹⁹ Department of the Army, Army Operational Support, Army Field Manual 100-16 (Washington, D.C.: U.S. Department of the Army, May 1995), 3-10.

²⁰ LTC Fred Hart, Maintaining and Sustaining the United States Army in the 21st Century (Carlisle Barracks, PA: U.S. Army War College Strategy Research Project, 6 April 1998), 19.

²¹ Department of the Army, Decisive Force: The Army in Theater Operations, Field Manual 100-7 (Washington, D.C.: U.S. Department of the Army, May 1995), uses neither the terms "TAACOM" or "TASCOM" to describe the senior logistics headquarters supporting the Army Service Component Commander. FM 100-16, "Army Operational Support", May 1995, uses the term "TAACOM" only once (p. 6-3). Although the TAACOM is presently the largest tactical CSS organization in the Army, the Combined Arms Support Command's (CASCOM) intent is to streamline the theater army's logistical structure in accordance with the TASCOM concept.

²² U.S. Army Logistics Integration Agency, "Briefing the Revolution in Military Logistics", January 1999; available from <<http://134.11.28.15/webs/logweb/aslp/aslpintr.html>>; Internet; accessed 15 January 1999.

²³ GEN Carter B. Magruder, Recurring Logistics Problems as I Have Observed Them (Washington, D.C.: Center of Military History, 1991), 4-14.

²⁴ For example, see MAJ T. Robert Bois, "Making Sea-Based Logistics a Reality: A Proposal for In-Stride Sustainment", Air-Land-Sea Bulletin (ALSB), Issue 98-2.

²⁵ The Joint Staff, Unified Action Armed Forces (UNAAF), Joint Publication 0-2 (Washington, D.C.: The Joint Staff, 24 February 1995), III-7.

²⁶ The ideas in this paragraph are based on remarks made by a senior officer participating in the Commandant's Lecture Series.

²⁷ Joint Publication 0-2, I-6.

²⁸ Title 10, U.S. Code Armed Forces, Prepared for the use of the Committee on National Security of the House of Representatives (Washington, D.C.: U.S. Government Printing Office, 31 December 1996), Chap. 3, Sec. 125.

²⁹ Ibid., Chap. 8, Sec. 191.

³⁰ GEN Leon E. Salomon, "Open Letter on a Unified Logistics Command," Army Logistician (September-October 1995): 11.

³¹ Strategic Assessment Center, Dominating Maneuver Synthesis Report, 47-51. Demand reduction technologies will reduce weights of equipment, cut fossil fuel requirements significantly, and reduce the size and weight of ammunition.

³² Field Manual 100-7, Decisive Force: The Army in Theater Operations, 7-1.

³³ Shelton, "Operationalizing Joint Vision 2010", 83.

³⁴ J3, U.S. Atlantic Command, Leading Change (Slide Briefing), February 1999, available from Carlisle Barracks Intranet, P:/miscel/scap/acom; accessed 25 February 1999.

³⁵ Ibid.

³⁶ Adam Hebert, "Initial Study on Logistics Reform Due Today; Leadership Calls For Radical Change," 15 January 1999; available from <<http://ebird.dtic.mil/Jan1999/e19990115initial.html>>; Internet; accessed 10 February 1999.

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